Tree Inventory and Preservation Plan
42 Park Street, 44 Park Street, 46 Park Street, and 23 Elizabeth Street
Mississauga, Ontario

SPA No.: SP 22-12 W1
OLT File No.: OLT-21-002260

prepared for

Edenshaw Elizabeth Development Limited
129 Lakeshore Road East, Suite 201
Mississauga, Ontario
L5G 1E5

prepared by

KUNTZ FORESTRY CONSULTING Inc.

PO Box 1267 Lakeshore W PO
146 Lakeshore Road West
Oakville ON L6K 0B3
289.837.1871
www.kuntzforestry.ca
consult@kuntzforestry.ca

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Revision 4: 26 August 2025

KUNTZ FORESTRY CONSULTING INC. Project P2371

Introduction

Kuntz Forestry Consulting Inc. was retained by Edenshaw Elizabeth Development Limited to complete a Tree Inventory and Preservation Plan as part of a development application for the properties located at 42 Park Street, 44 Park Street, 46 Park Street, and 23 Elizabeth Street in Mississauga, Ontario. The subject site is located north of Lakeshore Road East and west of Hurontario Street, within a residential area.

The work plan for this tree preservation study included the following:

- Prepare an inventory of the tree resources measuring over 10cm diameter at breast height (DBH) on and within six metres of the subject site and trees of all sizes within the road right-of-way;
- Evaluate potential tree saving opportunities based on the proposed development plans; and,
- Document the findings in a Tree Inventory and Preservation Plan.

The results of the evaluation are provided below.

Methodology

Tree Inventory

Trees measuring over 10cm DBH on and within six metres of the subject site and trees of all sizes within the road right-of-way were included in the tree inventory. Trees were located using the topographic survey provided and estimations made from known points in the field. The City of Mississauga requires dripline as the limit of protection and as such the dripline of each tree was estimated in field. Trees included in the inventory were identified and tagged as Trees 673 – 700.

Tree resources were assessed utilizing the following parameters:

Tree # – Number assigned to trees that corresponds to Figure 1.
Species – Common and botanical names provided in the inventory table.
DBH – Diameter (cm) at breast height, measured at 1.4 metres above the ground.
Condition – Condition of tree considering trunk integrity (TI), crown structure (CS), crown vigor (CV), and root zone environment (RZE). Condition ratings include poor (P), fair (F), and good (G).
Crown Dieback – Percentage of dead branches within the crown.
Dripline – Crown radius (m).
Comments – Any other relevant tree condition information.

Refer to Figure 1 for the tree locations and Table 1 for the results of the tree inventory.

Tree Valuation

A valuation was calculated for all trees within the road right-of-way. The value of each tree was calculated using the Trunk Formula Technique. This method is described in the Guide for Plant Appraisal, 10th Edition (Council of Tree and Landscape Appraisers, 2018). The Ontario Supplement (2021) provides regionally relevant data pertaining to species-specific basic costs for trees.

The Trunk Formula Technique is commonly used for trees that are larger than what is generally available for transplant from a nursery. The Unit Tree Cost of the replacement tree is derived from a survey of nurseries or supplied by the Regional Plant Appraisal Council and published within the Ontario Supplement. For Ontario, the species-specific Unit Tree Costs have been calculated within the Ontario Supplement and these Unit Tree Costs have been used for the calculation. Some species do not have the species-specific Unit Tree Costs; in such cases, a generic unit tree cost of $\$6.51/cm^2$ was applied (Ontario Supplement, 2003).

The Basic Tree Cost is calculated by multiplying the Unit Tree Cost by the cross-sectional area of the subject tree. For multi-stemmed trees, the appraised trunk area considers the cross-sectional area of all stems. The Appraised Value is calculated by multiplying the Basic Reproduction Cost by the three depreciation factors (Condition Rating, Functional Limitation Rating, and External Limitation Rating, as described in the Guide).

The Appraised Value is therefore calculated using the following equation:

Basic Tree Cost = Appraised Tree Trunk Area x Unit Tree Cost

Appraised Value = Basic Tree Cost x Condition Rating x Functional Limitation Rating x External Limitation Rating

Functional Limitation Ratings and External Limitation Ratings are calculated according to the methods outlined in the Guide. Condition Ratings were calculated based on the assessed condition of the trees on the site and in accordance with the Guide. The final values were rounded to the nearest $100 for values greater than $2000, and to the nearest $5 for values less than $2000.

Refer to Table 2 for the results of the tree valuation.

Existing Site Conditions

The subject site is currently occupied by four residential homes with associated garages, driveways, and backyards. Tree resources exist in the form of landscape trees and natural regeneration. Refer to Figure 1 for the existing site conditions.

Tree Resources

The tree inventory was conducted on 13 April 2020. The inventory documented 28 trees on and within six metres of the subject site. Refer to Table 1 for the full tree inventory, Figure 1 for the location of trees reported in the tree inventory, and Appendix A for photographs of the trees.

Tree resources were comprised of Cherry (*Prunus* spp.), Weeping White Mulberry (*Morus alba* 'Pendula'), White Spruce (*Picea glauca*), Siberian Elm (*Ulmus pumila*), Little-leaf Linden (*Tilia cordata*), Manitoba Maple (*Acer negundo*), Eastern White Cedar (*Thuja occidentalis*), Tree-of-Heaven (*Ailanthus altissima*), White Mulberry (*Morus alba*), and Black Walnut (*Juglans nigra*).

Proposed Development

The proposed development includes the demolition of all existing structures and the construction of a multi-storey residential building with an associated underground parking

garage, a new vehicle entrance way, and landscaping upgrades. Refer to Figure 1 for the proposed site plan.

Discussion

The following sections provide a discussion and analysis of tree impacts and tree preservation relative to the proposed work and existing conditions.

Development Impacts / Tree Removal

The removal of 25 trees will be required to accommodate the proposed development and / or due to their condition. The trees that require removal in order to accommodate the proposed development include Trees 673, 675, 678 – 680, 684, 686 – 693, 696, and 698 – 700. These trees either conflict directly with the proposed development or the level of encroachment into their driplines resulting from the proposed work would be at an intolerable level such that the trees would not be expected to overcome the injury. Trees 674, 676, 677, 682, 683, 695, and 697 are in poor or hazardous condition and their removal is advised regardless of the proposed development.

Trees 674, 676, 677, 679, 680, 682, 684, 687 – 692, 699, and 700 are located on private property and are greater than 15cm DBH, therefore the issuance of a permit will be required prior to the removal of these trees. Trees 673, 692, 693, and 695 – 698 are located fully or partially within the road right-of-way, therefore permission from the City of Mississauga will be required prior to their removal. Trees 676 – 680, 682, 684, 686, and 687 are located fully or partially on neighbouring properties and as such, written permission from the respective neighbouring landowners will be required prior to their removal. Refer to Figure 1 for the locations of the proposed tree removals.

Tree Preservation

The preservation of the remaining three trees, including Trees 681, 685, and 694, will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures must be implemented prior to the commencement of the proposed works to ensure tree resources designated for preservation are not impacted by the proposed development. Refer to Figure 1 for the location of required tree preservation fencing and the general Tree Protection Plan Notes. Refer to Appendix B for the tree preservation fencing details.

Where the dripline of a tree cannot be fully respected, including for Trees 681, 685, and 694, special mitigation measures have been prescribed and are outlined below.

<u>Trees 681 and 685</u>

Encroachment into the driplines of Trees 681 and 685 will be required to facilitate the construction of a proposed retaining wall. If the following mitigation measures are employed, long-term adverse effects are not anticipated for these trees.

1. Air-spade or low-pressure hydro-vacuum technology should be used to excavate trenches in the locations indicated on Figure 1, under the supervision of a Certified Arborist.

2. The depth of the trenches will depend on the depth of excavation required to construct the proposed retaining wall, to a maximum depth of 90cm, or as determined by the conditions encountered.
3. Any roots that require pruning within the trenches should be pruned by a Certified Arborist in accordance with Good Arboricultural Standards.
4. The trenches should be backfilled with clean topsoil.
5. Any branches that require pruning to accommodate the proposed works should be pruned by a Certified Arborist or other tree professional in accordance with Good Arboricultural Standards.

Tree 694

Encroachment into the dripline of Tree 694 will be required to facilitate the proposed regrading works. If the following mitigation measures are employed, long-term adverse effects are not anticipated for this tree.

1. Prior to the commencement of the proposed works, tree preservation fencing should be installed as shown on Figure 1.
2. Where filling is required within the dripline of this tree, the depth of fill should be minimized as much as possible.
3. Where cutting is required within the dripline of this tree, it should occur by hand or using small machinery (i.e. a skidsteer or miniature excavator) and under the supervision of a Certified Arborist.
    a. Any roots encountered during the cutting process should be pruned by a Certified Arborist in accordance with Good Arboricultural Standards.

Tree Valuation

A tree valuation of all trees located within the road right-of-way was conducted. Refer to Table 2 for the results of the tree valuation.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Edenshaw Elizabeth Development Limited to complete a Tree Inventory and Preservation Plan as part of a development application for the subject properties located at 42 Park Street, 44 Park Street, 46 Park Street, and 23 Elizabeth Street in Mississauga, Ontario. A tree inventory was conducted and reviewed in the context of the proposed site plan.

The findings of the study indicate a total of 28 trees on and within six metres of the subject site and within the road right-of-way. The removal of 25 trees will be required to accommodate the proposed development. The remaining three trees can be preserved with the use of appropriate tree protection measures, as outlined in Figure 1.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for tree preservation fencing locations and general Tree Protection Plan Notes and tree preservation fence details.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Special mitigation measures have been prescribed for select trees, as outlined in the *Tree Preservation* section of this report.

- Branches and roots that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree roots and branches must be in accordance with Good Arboricultural Standards.

- Site visits, pre, during, and post construction are recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,

Kuntz Forestry Consulting Inc.

Kimberly Dowell

Kimberly Dowell, Urban Forestry Specialist
Master of Forest Conservation, ISA Certified Arborist #PN-8858

Kaylee Harper

Kaylee Harper, B.Sc.Env. Ecology
Ecologist, ISA Certified Arborist #ON-2749A
Tree Risk Assessment Qualified
Email: kaylee.harper@kuntzforestry.ca
Office: 289-837-1871 ext. 105
Cell: 519-572-5949

Resources

Council of Tree and Landscape Appraisers, 10th Edition, 2018 Guide for Plant Appraisal, CTLA TFM. International Society of Arboriculture, Champaign, Illinois. 170 pp.

Ontario Supplement to the Guide for Plant Appraisal- 9th Edition, 2003. ISA Ontario – Regional Plant Appraisal Committee

Ontario Supplement to the Guide for Plant Appraisal- 10th Edition, 2021. ISA Ontario – Regional Plant Appraisal Committee

Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (i.e. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree locations in the report may not be exact. Where KFCI's in-house GPS unit is used (if applicable), tree locations are accurate only to the extent that the technology allows, which can be variable based on satellite available, RTK network / cell coverage, canopy coverage, and/or projection transformation limitations. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the development plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the development plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Location: 42 Park Street, 44 Park Street, 46 Park Street, and 23 Elizabeth Street, Mississauga Date: 13 April 2020 Surveyors: KD

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	RZE	CDB	DL	Comments	Owner	Action
673	White Spruce	*Picea glauca*	~65	G	G	G	FG		6.0	Included fence, exposed roots (M)	City	Remove
674	Manitoba Maple	*Acer negundo*	~40	P	P	P	F		2.5	Topped at 6 metres, epicormic branching (H), cavity (H)	Subject	Remove (Condition)
675	Weeping White Mulberry	*Morus alba* 'Pendula'	13	G	G	G	FG		1.5	Broken branches (L)	Subject	Remove
676	Manitoba Maple	*Acer negundo*	~30, ~20	P	P	P	F		4.0	Multiple stem failures, cavities (H), deadwood (H), epicormic branching (H), multi-stem at base, coppice growth (H), included fence, leaning on utility pole	Shared (Subject / Neighbour)	Remove (Condition)
677	Manitoba Maple	*Acer negundo*	~75	P	F	PF	PF		4.5	Pruning wounds (H), coppice growth (H), epicormic branching (H), included fence	Shared (Subject / Neighbour)	Remove (Condition)
678	Manitoba Maple	*Acer negundo*	13	F	F	FG	PF		4.5	Impervious surface in 50% of root zone	Shared (Subject / Neighbour)	Remove
679	Siberian Elm	*Ulmus pumila*	~75, ~40	PF	F	PF	PF		7.0	Co-dominant stems at 0.5 metres, included bark (M), broken branches (M), included fence, epicormic branching (H), cavity (M) at 0.5 metres, impervious surface in 50% of root zone	Shared (Subject / Neighbour)	Remove
680	Manitoba Maple	*Acer negundo*	20	F	PF	F	F		5.0	Deadwood (M), pruning wounds (M), bow (M), debris in root zone, epicormic branching (L)	Shared (Subject / Neighbour)	Remove
681	Little-leaf Linden	*Tilia cordata*	~45	FG	G	FG	P		4.0		Neighbour	Preserve (Injure)
682	Manitoba Maple	*Acer negundo*	~23, ~10	P	P	PF	F		3.5	Debris in root zone, deadwood (H), one stem dead, multi-stem at base, pruning wounds (H), cavity (H) at base	Neighbour	Remove (Condition)
683	Black Walnut	*Juglans nigra*	12	F	P	P	FG		0.5	Topped at 2.5 metres	Subject	Remove (Condition)
684	Siberian Elm	*Ulmus pumila*	35, 33, 16	PF	F	F	PF		8.0	Multi-stem at base, deadwood (L), epicormic branching (M), stem wound (M) at 1.5 metres, impervious surface in 50% of root zone	Neighbour	Remove
685	Manitoba Maple	*Acer negundo*	12	F	F	FG	PF		2.5	Pruning wounds (M), impervious surface in 50% of root zone, included fence	Neighbour	Preserve (Injure)
686	Manitoba Maple	*Acer negundo*	12, 6, 6	F	F	F	F		4.0	Coppice growth (H), lean (L), pruning wounds (H), deadwood (M)	Neighbour	Remove
687	Little-leaf Linden	*Tilia cordata*	16	G	G	FG	F		4.0		Neighbour	Remove
688	Siberian Elm	*Ulmus pumila*	33	PF	F	FG	F		5.0	Co-dominant stems at 2 metres, broken branches (L), included fence, girdling trunk (H) from fence, epicormic branching (L)	Subject	Remove
689	Cherry species	*Prunus spp.*	32	F	PF	F	F		6.0	Pruning wounds (H), sweep (L), debris in root zone, epicormic branching (M)	Subject	Remove
690	Cherry species	*Prunus spp.*	31	F	PF	F	FG		4.5	Pruning wounds (H), co-dominant stems at 1.5 metres, broken branches (L)	Subject	Remove
691	Tree-of-Heaven	*Ailanthus altissima*	~95	F	FG	FG	F		9.0	Seams (L), cavity (L) from pruning wound, pruning wounds (M), included fence, clothesline pulley inserted into trunk, vine competition (L)	Subject	Remove
692	Tree-of-Heaven	*Ailanthus altissima*	110	F	F	F	F		9.0	One stem dead, asymmetrical crown (M), pruning wounds (M), cavity (L)	Shared (Subject / City)	Remove
693	Siberian Elm	*Ulmus pumila*	3	G	FG	G	F		0.5		City	Remove
694	White Mulberry	*Morus alba*	~15, ~8, ~8	F	F	F	F		2.5	Multi-stem at base, pruning wounds (M), included bark (M), epicormic branching (H), lean (L)	City	Preserve (Injure)
695	Eastern White Cedar	*Thuja occidentalis*	27, 27	P	PF	FG	PF		3.5	Co-dominant stems at base, included bark (M), cavity (H) at union, one stem topped at 6 metres, pruning wounds (M)	City	Remove (Condition)
696	Weeping White Mulberry	*Morus alba* 'Pendula'	11	G	FG	G	F		1.0	Broken branches (L), included bark (L)	City	Remove
697	Manitoba Maple	*Acer negundo*	64	PF	PF	PF	F		6.0	Pruning wounds (H), epicormic branching (H), asymmetrical crown (M), seams (M), cavities (M), cavity (H) where large stem was previously pruned, broken branches (L)	City	Remove (Condition)
698	Manitoba Maple	*Acer negundo*	18, 15, 11	F	PF	F	FG		4.0	Multi-stem at base, one stem pruned at base, pruning wounds (M), broken branches (L)	City	Remove
699	Manitoba Maple	*Acer negundo*	15, 14	F	F	FG	FG		2.5	Pruning wounds (M), co-dominant stems at 0.25 metres, included bark (H), epicormic branching (M)	Subject	Remove
700	Black Walnut	*Juglans nigra*	116	G	FG	G	F		10.0	Co-dominant stems at 3 metres, pruning wounds (L)	Subject	Remove

Codes		
DBH	Diameter at Breast Height	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
RZE	Root Zone Environment	(G, F, P)
CDB	Crown Dieback	(%)
DL	Dripline (Radius)	(m)
Owner	Ownership of Tree	(Subject, City, Neighbour)
P = poor, F = fair, G = good, ~ = estimate, (L) = light, (M) = moderate, (H) = heavy		

Table 2. Tree Valuation

Location: 42 Park Street, 44 Park Street, 46 Park Street, and 23 Elizabeth Street, Mississauga

Tree #	Common Name	Scientific Name	DBH	OC	*Appraised Trunk Area (cm^2)*	*Unit Tree Cost (RPAC) ($/cm^2$)*	*Basic Tree Cost ($)*	Depreciation			*Appraised Tree Value*	*Adjusted Tree Value*
								Condition Rating (%)	*Functional Limitation Rating (%)*	*External Limitation Rating (%)*		
673	White Spruce	*Picea glauca*	~65	G	*3318*	*4.16*	13802.88	*0.900*	*0.70*	*1.00*	$ 8,695.81	$ 8,700.00
692	Tree-of-Heaven	*Ailanthus altissima*	110	F	*9503*	*6.51*	61866.74	*0.550*	*0.80*	*1.00*	$ 27,221.37	$ 27,200.00
693	Siberian Elm	*Ulmus pumila*	3	FG	*7*	*7.18*	50.75	*0.725*	*0.50*	*1.00*	$ 18.40	$ 20.00
694	White Mulberry	*Morus alba*	~15, ~8, ~8	F	*284*	*6.51*	1848.84	*0.550*	*0.75*	*1.00*	$ 762.65	$ 765.00
695	Eastern White Cedar	*Thuja occidentalis*	27, 27	P	*1134*	*3.44*	3900.96	*0.200*	*0.25*	*1.00*	$ 195.05	$ 195.00
696	Weeping White Mulberry	*Morus alba* 'Pendula'	11	FG	*95*	*6.51*	618.67	*0.725*	*0.50*	*1.00*	$ 224.27	$ 225.00
697	Manitoba Maple	*Acer negundo*	64	PF	*3217*	*6.51*	20942.66	*0.375*	*0.40*	*1.00*	$ 3,141.40	$ 3,100.00
698	Manitoba Maple	*Acer negundo*	18, 15, 11	PF	*531*	*6.51*	3456.81	*0.375*	*0.40*	*1.00*	$ 518.52	$ 520.00

Codes		
DBH	Diameter at Breast Height	(cm)
OC	Overall Condition	(G, F, P)
P = poor, F = fair, G = good, ~ = estimate		

Appendix A: Photographs of Inventoried Trees

Image 1. Tree 673

Image 2. Tree 674

Image 3. Tree 675

Image 4. Tree 676

Image 5. Tree 677

Image 6. Trees 678 and 679

Image 7. Tree 680

Image 8. Tree 681

Image 9. Tree 682

Image 10. Trees 683 and 684

Image 11. Trees 685 – 687

Image 12. Tree 688

Image 13. Tree 689

Image 14. Tree 690

Image 15. Tree 691

Image 16. Tree 692

Image 17. Tree 693

Image 18. Tree 694

Image 19. Tree 695

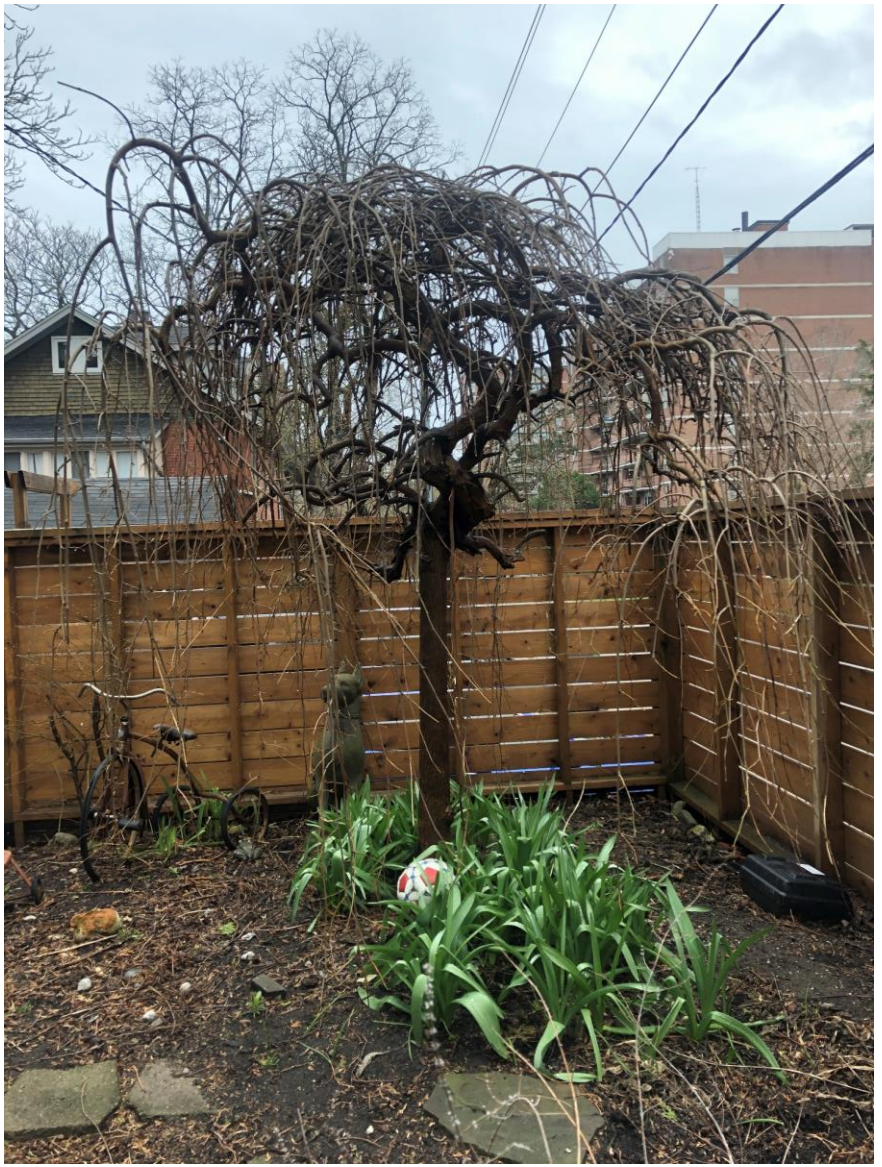


Image 20. Tree 696

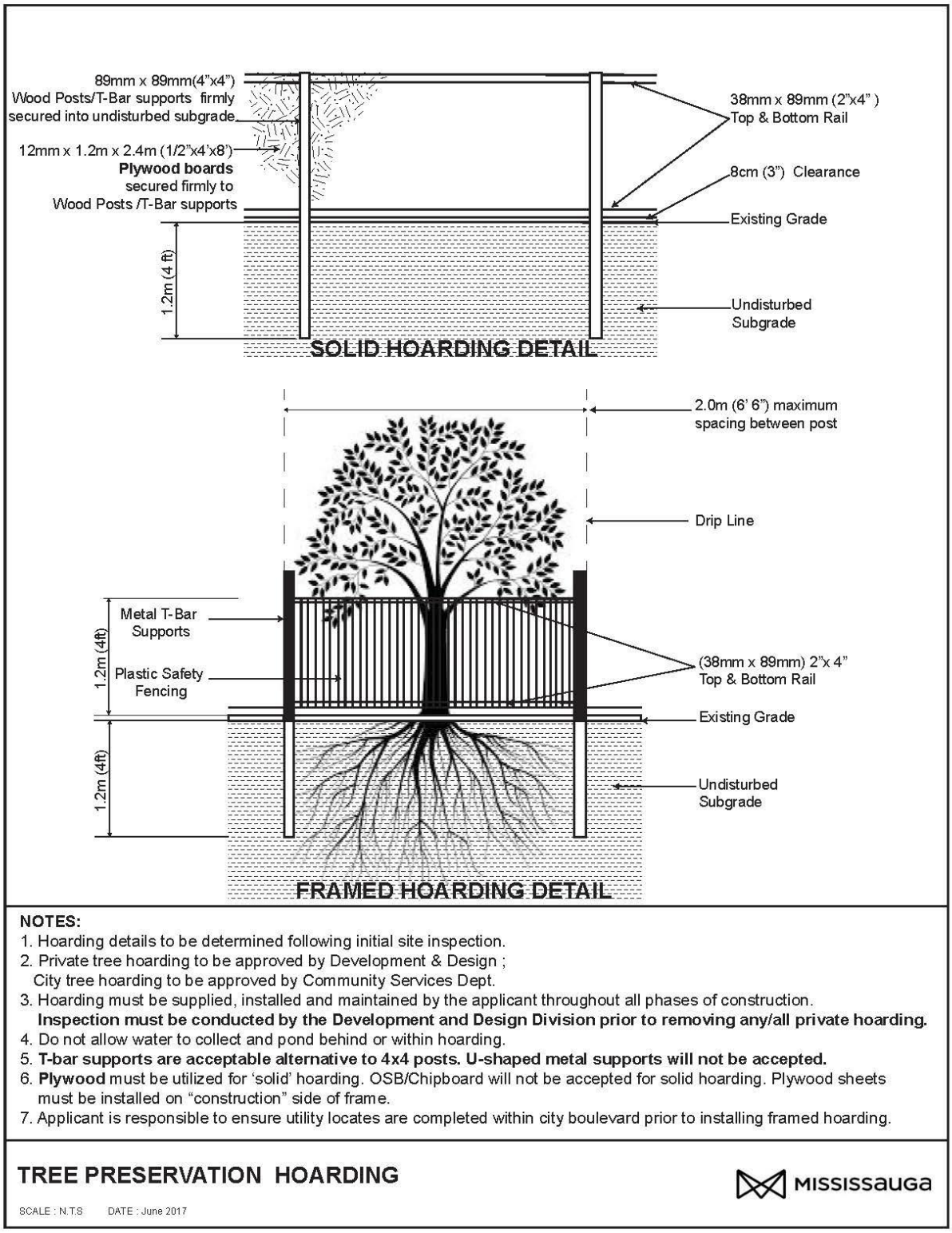
Image 21. Tree 697

Image 22. Tree 698

Image 23. Tree 699

Image 24. Tree 700

Appendix B: Tree Preservation Fencing Details



NOTES:

1. Hoarding details to be determined following initial site inspection.
2. Private tree hoarding to be approved by Development & Design ;
   City tree hoarding to be approved by Community Services Dept.
3. Hoarding must be supplied, installed and maintained by the applicant throughout all phases of construction.
   Inspection must be conducted by the Development and Design Division prior to removing any/all private hoarding.
4. Do not allow water to collect and pond behind or within hoarding.
5. **T-bar supports are acceptable alternative to 4x4 posts. U-shaped metal supports will not be accepted.**
6. **Plywood** must be utilized for 'solid' hoarding. OSB/Chipboard will not be accepted for solid hoarding. Plywood sheets must be installed on "construction" side of frame.
7. Applicant is responsible to ensure utility locates are completed within city boulevard prior to installing framed hoarding.

TREE PRESERVATION HOARDING

MISSISSAUGA

SCALE : N.T.S DATE : June 2017